MAP RALLY

Understanding co-ordinates
and compass directions.

AMSTRAD CPC

DISC PROGRAMS

To load this title simply follow these steps:

1. Reset the computer — see the cassette loading section on how to do this.
2. Place the disc in the drive with the label on the top side and the label towards you.
3. Type RUN "DISC" followed by pressing the ENTER key.
4. The disc light will come on and the program will be read from the disc. When loaded the program will present you with a list of choices. Choose the number you want by pressing the corresponding key followed by the ENTER key.

Note that some programs load and save data files. The program will show you a list of files on the disc before each load or save. Make sure that if you are loading a file, you spell the filename correctly, and if you are saving a file that a file with the name you have chosen does not exist already. When saving a file don't forget that you can only save files on a disc which has the write protect hole blocked. If you are unsure of what to do refer to the disc user's guide which contains more information about the use of discs.

- Teaches co-ordinates and compass directions.
- Improves estimating and accuracy.
- Helps develop deductive reasoning.

SPECIAL FEATURES

- Three levels of complexity, allowing children to develop skills at an early age, or to enjoy continuing practice.
- Measures individual skills – minimum distance, time, number of moves, etc.
- Separate programs to develop the understanding of co-ordinates and compass directions.
- Full BES MONITOR retaining information of previous five users. Features not only development of route taken but also detailed analysis of individual performance.
- Complete with fully explanatory booklet.
- Widely used in schools.

Best suited for children aged 7 to 13 years.

MAP RALLY

Somewhere on a grid are three hidden checkpoints. The navigator can only give the rough direction in which they lie. The car is moved across the grid by giving instructions as to where it needs to go to. When the checkpoint is found, the player must check in. A player can race against the clock or two cars can race against each other. Children soon become used to using co-ordinates and compass directions to control the cars.

The program records the time and number of moves taken. After the rally, the children can watch the cars drive around each route taken showing how well each car did.

TAPE CONTENTS

Moving by directions:
  MR
  MR2

Moving by co-ordinates:
  MRC
  MRC2

PROGRAM NOTES CONTENTS

INTRODUCTION

The main objectives of the two MAP RALLY programs are to help children understand compass directions, estimation of distances by reference to co-ordinates and the use of map co-ordinates. This is achieved in a motivational and enjoyable way by the simulation of a car rally, where hidden checkpoints have to be located with the help of advice from a navigator.

Two programs are used, one to cover the understanding of compass directions, the other co-ordinates. In both cases there can be a single player, two players or teams. Three levels of difficulty are catered for, allowing a steady improvement through practice to the understanding of the topics covered. To add further interest, a time limit can be used, whereby penalty points are incurred by players taking over the permitted time to complete a move.

In "Moving by directions" no understanding of compass direction is needed for a child to use the program effectively. The child has to follow the "navigator advice" – e.g. North and

East, and enter the appropriate directions, i.e. at the prompt line in response to the request "Enter direction (N/S)" you might enter N (for North), and at "Enter direction (E/W)" E (for East).

Thus the child has to enter the same letter as the navigator advice. Learning then takes place as the car moves in the directions of N and E. In addition the miniature compass rose is repeated throughout the program, and on the matrix screens, to reinforce the learning process.

In common with most BES programs, use of the ESCape key takes you back to the main set of program options. Simply press ESCape twice to revert to the main menu.

The programs are designed for use with children in the age range 7 to 13 years. However, this can only be a broad guide, as the capabilities of individual children will extend this range both above and below the given age range.

LOADING

It is best to press CTRL and SHIFT and whilst holding them down, press the

ESCape key. This resets the computer before loading. The cassette should then be placed in the Datacorder with the label upwards.

The cassette contains two Map Rally programs. To load 'Map Rally – Moving by Directions', make sure the tape is wound back to the beginning. Simply press CTRL and the small ENTER key, followed by pressing the PLAY key on the Datacorder and then pressing any other key. Loading of the program takes about four minutes.

For 'Map Rally – Moving by Co-ordinates', again hold down CTRL and press and then release the small ENTER key. Now use the FF (fast forward) button on the recorder to wind the tape on to approximately a third of its length, and then press PLAY. If 'found MR2' appears, then it is necessary to let the tape run on until the end of the file, or to use the FF button. If 'found MRC' or 'found MRC2' appears it is necessary to rewind the tape and repeat until the tape is positioned in front of the 'MRC' file. After this, simply press CTRL and the small ENTER key, followed by

pressing the PLAY key on the Datacorder and then pressing any other key. Loading of the program again takes about four minutes in all.

Having completed loading, the program displays the title and copyright screen for a few seconds. No entries are necessary and the program will automatically move on to the main menu screen.

THE MAIN PROGRAMS
(A) MOVING BY DIRECTIONS
1. Start
Having chosen a time limit (see option 3) if required, there follows the option of three stages of difficulty:

(1) Fairly easy
(2) Moderate
(3) Fairly difficult

Choice of the appropriate option sets the size of the matrix. Thus option (1) leads to a matrix of 6 x 6 squares (km), option (2) 12 x 12 squares (km), and option (3) to 18 x 18 squares (km).

The appropriate choice of 1 or 2 players (or in the latter case there can be teams) is then made and ENTER

pressed followed by the name of the players.

The matrix is then displayed, and the navigator's advice for the blue car is given. This is shown as directions are normally given, i.e. North/South followed by East/West. The appropriate entry in the order of the convention of map references is then made on the prompt line, followed, of course, by ENTER. The child then has to gauge the appropriate distance in 'kilometres' to move to find the check point. The aim is to achieve this with the minimum number of moves and in the minimum distance — and of course without incurring penalties through over-running the time limit! If there are two players then the red car driver follows with the appropriate entries. The three check points are located at random for each 'rally', and with two players/teams are, of course, at different locations (no follow-my-leader option!). The finish is at the extreme North East corner of the matrix. Note that if two cars occupy the same point then it is displayed as one white car rather than a blue and a red car.

On reaching the check point, the child is rewarded by a cheerful tune and then requested to "check in" by pressing the key C. Stages 2 and 3 then follow, with the random check-in points needing to be located. Finally the finish is reached – which ought to be made in one move only – and the course completed.

At any time during entry of the direction/distance instructions the DELETE key can be used to cancel the entries provided this is done before ENTER is pressed for the last entry. Thus if an error is made, press DELETE and re-enter.

On completion of the rally by the player(s) pressing <SPACE> leads to a screen showing the location of the check points, and the route taken by the blue player is then shown as it was developed. This screen is particularly instructive for children as they can see at a glance any illogical moves, and thus can learn readily from his mistakes. Pressing <SPACE> leads to the appropriate matrix for the red car if two players have been using the program.

The following screen gives a synopsis of the results of the "rally" for each player with the following information:

Name(s) of player(s)

Time taken in minutes and seconds

The number of moves

The route taken in km

The number of penalty km

The total distance

The minimum number of km necessary to reach the 3 check points and the finish

The extra distance travelled beyond the direct route.

If there were two players then a winners table is displayed:

Who took the shortest time

Who took the least number of moves

Who travelled the shortest distance

Quite often there is no clear winner on all counts thus motivating both players.

2. Look up Monitor Results

All interactive BES programs contain a performance recording system or MONITOR. Using this, teachers, parents or the child can see how well the child

is performing a task. Only then can a child's ability and educational needs be identified.

Each time a new name is entered after starting the program from the main menu, a new monitor record is created. The facility will hold the record of the last six children (after number six, number seven will be recorded over number one, eight over two, etc.).

The Map Rally MONITOR gathers information which includes a map of the route taken, information about their route, the number of times they attempted to move off the grid and moves against the navigator's advice.

Careful analysis of the information stored in these records can provide a valuable guide to the needs and successes of each child.

3. Set Time Limit

To add an additional challenge and maintain interest as the user becomes more skilled, a time limit can be set for each move. The time can be set at between 1 and 60 seconds, or alternatively 0 entered to set no time limit. The time

entered is the time allowed for each move before penalties are incurred. At early stages a time limit of around 10 to 20 seconds is recommended.

(B) DRIVING BY CO-ORDINATES

The second program on the tape differs from the first in the way the child steers the car around the matrix. In this program the car is moved to a point specified by co-ordinates. The convention adopted is that for map references, i.e. Easting first then Northing.

For example, if the cars are at the intersection of the lines from east 1 and north 1 then its current location is E1,N1. If you wanted to move then look up the co-ordinates of the destination and enter them, e.g. E2,N3. The East co-ordinate is entered first, followed by ENTER, with the North co-ordinate second, again followed by ENTER. In the usual convention of map references, the co-ordinates are separated by a comma, which appears automatically with the first press of ENTER. As with directions, the DELETE key can be used

at any time to change an entry before the second ENTER is made.

It should be noted that transposing from the navigator's advice to co-ordinates in this case is much more difficult and tests the child's understanding of the directions. In all other respects this program functions as 'Moving by Directions'.

OTHER BES PROGRAMS

Map Rally is one of a series of Microcomputer programs produced by Bourne Educational Software Ltd with the aim of making learning both easy and enjoyable. The programs are aimed at both home and school use, and are designed to enable children of the appropriate age range to operate them readily through common use of such items as ESCAPE to return to a menu of program options; <SPACE> to move on to a next screen and so on.

A common feature with most BES programs is the BES MONITOR system, which allows the teacher, parent or child access to the specific entries made, so allowing identification of specific achievements or problem areas. This does not preclude the use in appropriate programs of a more simple and visible scoring system, which is designed to aid motivation. BES programs are designed to be largely self-explanatory, and follow similar styles Children rapidly familiarise themselves with new programs, and can use them if required with the minimum of help.

Other BES programs include:

Timeman One
The program helps children tell the time and set a clock. Attractive scoring with a man and a ladder keep childrens' interest. Choice of twelve progressive stages of difficulty, together with the usual attractive sound, colour and monitoring facilities. (Age 4–9 years).

Timeman Two
Companion program covering minutes to the hour, half and quarter hours and the 24-hour clock. Same attractive features as Timeman One with progressive stages of difficulty, together with attractive sound, colour and monitoring facilities. (Age range 4–10 years).

Happy Numbers
A program to help children learn their numbers and count without need of reading skills. Attractive graphics and scoring make this a favourite with 3 to 5 year olds.

Happy Letters
The program to teach children to match small and capital letters both on the screen and the keyboard. They love trying to stop the crocodile eating the fishes. Features attractive use of sound and colour as well as easy identification of problem letters for further practice. (Age 3–6 years).

World-Wise
Two programs to stimulate children to 'teach the computer' about geography. Encourages the use of atlases and reference books, helps exam studies and introduces the use of the computer to store information. Data can be readily saved and reloaded at any time. (Age 7–15 years).

Happy Writing

This program helps children form their letters and numbers correctly and encourages them to practise writing. A moving pencil point shows clearly where to start each figure. Tractors, attractive colour and sound all help to keep their interest. (Age 3–5 years).

Animal/Vegetable/Mineral

This program provides hours of fun and enjoyment as the computer tries to guess the object a child has thought of. The computer's failure to guess correctly encourages children to help the computer to tell the difference between the various objects. The program stimulates discussion and the use of reference books. Suitable for all ages 7 years and upwards.

Wordhang

This version of the traditional "Hangman" spelling game has been described as ''... the Rolls-Royce of them all''! Features over 250 words plus the ability to enter your own words – either individually or as a group (ideal for that weekly spelling list!). Improves spelling at all ages of 5 years and upwards.

THIS BOOKLET

BES programs always include explanatory booklets of this type to satisfy several objectives. Firstly, to identify the objectives of the program, and to give guidance as to some possible uses of the program based on experiences during the extensive in-classroom and in-house testing period. Secondly, they

are designed to give an understanding of the sequences encountered in the programs, since in many situations the time of access to the micro is at a premium. Thirdly, the booklet will assist in using the substantial content of BES programs to the full, through reference to it before, during and after use of the program on the micro.

In the event of any problems with the use of this program, or ideas as to improvements which could be incorporated, please do not hesistate to contact BES at the address on the back cover.
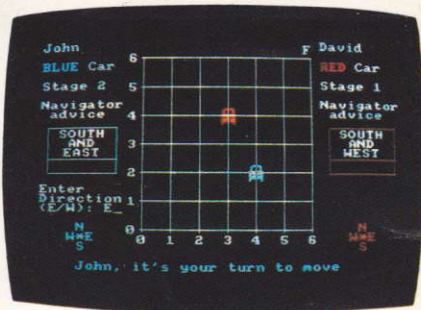
"Effective simulation of a Car Rally . . ."
"Map Rally is an enjoyable set of programs
suitable for children aged between seven and
thirteen. There are full instructions which
guide the user simply but effectively."

Educational Computing

BES